Plant and Soil

INTERNATIONAL JOURNAL OF PLANT NUTRITION,
PLANT CHEMISTRY, SOIL MICROBIOLOGY AND
SOIL-BORNE PLANT DISEASES

VOLUME III – IV

THE HAGUE
MARTINUS NIJHOFF
1951

Copyright 1951 by Martinus Nijhoff, The Hague, Holland
All rights reserved, including the right to translate or to reproduce this journal or parts thereof in any form

PRINTED IN THE NETHERLANDS

62-13130

SB13
P55

v. 3-4

CONTENTS — TABLE DES MATIÈRES — INHALT

PAGE

ALBRECHT, WM. A., see SHELDON, V. L.

AUDUS, L. J., The biological detoxication of hormone herbicides in soil 170

BLUE, WM. G., see SHELDON, V. L.

CHITWOOD, B. G., Root-knot nematodes. Part II. Quantitative relations of the root-knot nematode — *Meloidogyne hapla* Chitwood, 1949 with tomatoes, onions and lima beans . . . 47

DORRINGTON WILLIAMS, R., The effects of deficiencies of several trace elements on timothy (Phleum pratense L.) grown in solution culture 257

Erratum 408

GERRETSEN, F. C., Studies in photosynthesis. Part IV. Redox-potentials and corresponding pH changes in illuminated crude chloroplast suspensions 1

HALLAS, D. G., see HEWITT, E. J.

HARMSEN, G. W., Die Bedeutung der Bodenoberfläche für die Humusbildung 110

HARMSEN, G. W., see SMITTENBERG, J.

HASKELL, GORDON, pH tolerance and polyploidy in angiosperms 223

HEWITT, E. J., and D. G. HALLAS, The use of *Aspergillus niger* (Van Tiegh.) M strain as a test organism in the study of molybdenum as a plant nutrient 366

ILJIN, W. S., Metabolism of plants affected with lime-induced chlorosis (calciose). Part I. Nitrogen metabolism 239

——, Metabolism of plants affected with lime-inducted chlorosis (calciose). Part II. Organic acids and carbohydrates . . 339

JOHNSON, C. M., see STOUT, P. R.

JOHNSTON, H. W., Amendment to Gerretsen's technique for

the preparation of plates used for studying phosphate-dissolving micro-organisms 94

JONES, L. H. P., and G. W. LEEPER, The availability of various manganese oxides to plants 141

——, Available manganese oxides in neutral and alkaline soils 154

LECAT, P., Répartition et variations du système ascorbique chez les végétaux 267

LEEPER, G. W., see L. H. P. JONES

LÖHNIS, MARIE P., Manganese toxicity in field and market garden grops 193

MEAGHER, W. R., see STOUT, P. R.

MEIKLEJOHN, JANE, The effects of glucose on impure cultures of nitrifying bacteria 88

OTZEN, D., see SMITTENBERG, J.

PEARSON, G. A., see STOUT, P. R.

QUISPEL, A., see SMITTENBERG, J.

RAPPE, G., Seasonal variations in the rate of pasture regrowth after grazing 309

SHELDON, V. L., WM. G. BLUE and WM. A. ALBRECHT, Biosynthesis of amino acids according to soil fertility. Part I. Tryptophane in forage crops 33

——, Biosynthesis of amino acids according to soil fertility. Part II. Methionine content of plants and the sulfur applied 361

SMITTENBERG, J., G. W. HARMSEN, A. QUISPEL and D. OTZEN, Rapid methods for determining different types of sulphur compounds in soil 353

STEENBJERG, F., Yield curves and chemical plant analyses . 97

STOUT, P. R., W. R. MEAGHER, G. A. PEARSON and C. M. JOHNSON, Molybdenum nutrition of crop plants. Part. I. The influence of phosphate and sulfate on the absorption of molybdenum from soils and solution cultures 51

WANG, T. L., Nouvelle méthode de dosage des éléments minéraux fertilisants du sol par les Azotobacter 41

WIERSUM, L. K., Water transport in the xylem as related to calcium uptake by groundnuts (Arachis hypogaea L.) 160